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Title: Prevalence and Risk of Violence and the Mental, Physical and Sexual Health Problems Associated with Human Trafficking: An Updated Systematic Review

Short title: Human trafficking and health: updated systematic review

Abstract

Background. The present study updates and expands on a 2012 systematic review of the prevalence and risk of violence and the prevalence and risk of physical, mental and sexual health problems among trafficked people.

Methods. Systematic review and meta-analysis. Searches of fifteen electronic databases of peer-reviewed articles and doctoral theses were supplemented by reference screening, citation tracking of included articles, and expert recommendations. Studies were included if they reported on the prevalence or risk of violence while trafficked, or the prevalence or risk of physical, mental, or sexual health outcomes among people who have been trafficked. Two reviewers independently screened papers for eligibility and appraised the quality of included studies.

Results. Thirty-seven papers reporting on thirty-one studies were identified. The majority of studies were conducted in low and middle-income countries with women and girls trafficked into the sex industry. There is limited but emerging evidence on the health of trafficked men and the health consequences of trafficking into different forms of exploitation. Studies indicate that trafficked women, men and children experience high levels of violence and report significant levels of physical health symptoms, including headaches, stomach pain and back pain. Most commonly reported mental health problems include depression, anxiety and post-traumatic stress disorder. Although serological data on sexually transmitted infections are limited, women and girls trafficked for sexual exploitation self-report symptoms suggestive of a high prevalence of infections. Limitations of the review include methodological weaknesses of primary studies and some differences in definition and operationalisation of trafficking, which hinder comparability and generalisability of the results.

Conclusions. There is increasing evidence human trafficking is associated with high prevalence and increased risk of violence and a range of physical and mental health problems. Although more studies have emerged in recent years reporting on the health of trafficked men and people trafficked for forms of exploitation other than in the sex industry, further research is needed in this area. Appropriate interventions and support services to address the multiple and serious medical needs, especially mental health, of trafficked people are urgently needed.

Keywords: human trafficking, mental health, health, violence, systematic review.

Introduction

Human trafficking is a serious crime and human rights violation that often involves extreme forms of abuse and deprivation. Defined as the recruitment and movement of individuals - most often by force, coercion or deception - for the purposes of exploitation (United Nations, 2000), it is estimated to affect the lives of over 20 million people worldwide (International Labour Organisation, 2012). Individuals are trafficked for sexual exploitation but also for domestic servitude and forced labour in a range of industries, including factory work, agriculture, construction, commercial fishing and street begging. The violence, abusive living conditions and restrictions on movement commonly associated with trafficking pose serious risks to trafficked people's health, especially mental health. Although evidence on the psychological sequelae of trafficking is limited, studies suggest a high prevalence of depression, anxiety, and post-traumatic stress disorder among men and women in contact with post-trafficking support organisations (Kiss et al., 2015; Turner-Moss, Zimmerman, Howard & Oram, 2014).

A systematic review conducted in 2012 identified 19 studies reporting on the health risks and problems experienced by women and girls trafficked for sexual exploitation and found a high prevalence of physical and sexual abuse; depression; post-traumatic stress disorder (PTSD); physical symptoms such as headache, back pain, and memory loss; and sexually transmitted infection (Oram et al., 2012a). The review also highlighted the near-complete absence of evidence at that time on the health of trafficked men and of individuals trafficked for labour exploitation. However, 17 of the 19 included studies were published within the 5 years prior to the review, suggesting that this is a new and quickly developing research area. Recognising this rapid emergence in studies on health and trafficking, this review was conducted to provide a fuller and up-to-date synthesis of the evidence. Specifically, the systematic review aimed to establish:

a) The prevalence of violence and other health risks experienced by trafficked people
b) The prevalence and types of physical, mental, and sexual health problems among trafficked people
c) Risk factors associated with physical, mental, and sexual health problems among trafficked people.

Methods

The review followed PRISMA guidelines (Moher et al., 2009), and is registered with PROSPERO (registration CRD42015023564 (www.crd.york.ac.uk/prospero)). The PRISMA statement and protocol for this review are available as supplementary information.

Study selection criteria

Studies were eligible for inclusion if they: (a) included male or female adults or children who self-identified or were believed by the research team to have been trafficked; (b) measured the prevalence and/or the risk of physical, psychological or sexual violence whilst trafficked, and/or reported on the prevalence or risk of physical, mental, or sexual and reproductive health or disorder; and (c) presented the results of published peer-reviewed or doctoral research based on the following study designs: cross-sectional survey; case control study; cohort study; case series analysis; experimental study with baseline measures for the outcomes of interest; or secondary analysis of organisational records. If studies included trafficked people as a subset of a broader sample, data on trafficked people must have been reported separately. No restrictions were placed on language, country setting, or the method of measuring health risks and outcomes. Qualitative studies, editorials, opinion pieces, and reviews were excluded. If the same data were reported by multiple papers, the paper with the largest N relevant to the review objectives was included

Search strategy

We undertook electronic searches of ten databases indexing peer-reviewed academic literature and five databases and websites indexing theses and dissertations (including MEDLINE, EMBASE, and PsycINFO – see supplementary information for full list). All search terms from Oram et al's systematic review were included, plus additional terms for trafficking and specific mental disorders (see supplementary information). The date limits for searches were 1 January 2011 (the upper limit of the original review) until 17 April 2015. Electronic searches were supplemented by reference list screening and citation tracking using Web of Science and Google Scholar. Twenty-eight experts were asked to nominate additional papers that may have been eligible for inclusion; responses were received from eleven.

Data extraction and quality appraisal

Two reviewers (LO and SH) independently screened titles and abstracts; disagreements were resolved by consensus or by reference to a third reviewer (SO). If it was unclear whether a reference met the inclusion criteria it was retained for full text screening. Two reviewers (LO and SH) independently assessed the full text of potentially eligible studies; disagreements were again resolved by consensus or with the assistance of a third reviewer (SO). If studies collected data on prevalence or risk of violence or health outcomes among trafficked people but did not report it, information was requested from the study authors.

One reviewer (LO) extracted data on study design, sample characteristics, the definition and method of assessing human trafficking, outcome measures and outcomes of interest into standardised electronic forms. Where possible, outcome measures were extracted separately by gender, age, and type of exploitation. Data were extracted by a second reviewer (SH) from a random sample of 10% of papers: there were no discrepancies between reviewers and therefore no further dual extraction was undertaken.

The quality of included studies was independently appraised by two reviewers (LO and SH) using criteria adapted from the Critical Appraisal Skills Programme (CASP; 2014). The quality appraisal checklist included 15 items assessing study quality, including risk of selection and measurement bias (see supplementary material). Each item is rated with a grade between 0 and 2, giving a maximum total score of 30 and maximum subscores for risk of selection and measurement bias of 6 and 6, respectively. Reviewers compared scores and any discrepancies in component ratings were discussed and resolved. Studies scoring lower than 50% on questions relating to selection bias or measurement bias were judged to have a relevant risk of bias.

Data analysis

Prevalence estimates and odds ratios (ORs) were calculated, disaggregated by gender and type of exploitation where possible. Where multiple papers reported results from the same study, only the most definitive results were included for each outcome of interest. Pooled prevalence estimates and odds ratios (with corresponding 95% confidence intervals) were calculated when comparable data were available from validated instruments for three or more studies. All pooled estimates used random effects meta-analysis. Heterogeneity was estimated using the I^2 statistic, which describes the percentage of variation across studies that is due to heterogeneity rather than chance (Higgins & Thompson, 2002).

Results

The study selection process is described in Figure 1. Thirty-seven papers were ultimately included in the review, reporting on 31 studies and 15,085 participants. Two of the included papers were published in languages other than English.

Key features of included studies

Key characteristics of included studies are summarised in Table 1. Eighteen of the 31 included studies were conducted in South and Southeast Asia, nine in Europe, three in Latin America, and one in North America. Twenty-five studies were conducted with women and girls, predominantly in situations of sexual exploitation (22 of 25). Six studies reported on the experiences of trafficked men and children. Half of the studies (16/31) were conducted with participants recruited from post-trafficking support services; fourteen were carried out in alternative settings with women in the sex industry; 11 also included sex workers not identified by any official or non-governmental agency as trafficked ('non-trafficked'). Four studies were conducted in clinical settings, and one study reported findings from a community sample. Quality appraisal indicated that over half of the included studies had a relevant risk of bias: eighteen of the 31 scored lower than 50% on criteria relating to selection bias and twelve on criteria relating to measurement bias.

Violence

Eighteen studies reported on trafficked people's experiences of violence (Table 2). Eight studies compared experiences of violence for women trafficked for sexual exploitation to non-trafficked women working in the sex industry. Seven studies found significantly higher odds of violence among trafficked versus non-trafficked sex workers (Decker et al., 2011; George & Sabarwal, 2013; Gupta et al., 2011; Sarkar et al., 2008; Silverman et al., 2011, Silverman et al., 2014; Wirth et al., 2013). According to three studies, violence at entry or in the first

months after commencing sex work was higher among trafficked sex workers than non-trafficked sex workers; findings were less consistent with regards to violence at other time points. Findings were also inconsistent with regards to whether trafficked women who commenced sex work as minors were at higher risk of experiencing violence (Decker et al., 2009, Gupta et al., 2011,Silverman et al., 2011, Wirth et al., 2013).

Six studies reported on violence experienced by trafficked people in contact with post-trafficking support services (Di Tommasso et al., 2009; Kiss et al., 2015; Le, 2014; McCauley et al., 2010; Turner-Moss et al., 2013; Zimmerman et al., 2003). Women and girls who had been trafficked for sexual exploitation described high levels of physical and sexual violence, which ranged from 33.1% in a Cambodian case-file review (McCauley et al., 2010) to 89.6% in a multi-country European survey (Zimmerman et al 2008). Two studies published since the last systematic review provide data on the experiences of violence by trafficked men and children and people who had been trafficked for labour exploitation. A large multi-country survey conducted in post-trafficking services in the Greater Mekong Subregion of Southeast Asia reported that the prevalence of physical violence experienced by men, women and children was 49.1%, 41.3% and 23.8%, respectively (Kiss et al., 2015) and sexual violence 1.3%, 43.9%, and 21.5%, respectively. In the UK analyses of organisational records reported that approximately half of the 7 women and almost one-third of the 23 men trafficked for labour exploitation reported physical violence while trafficked (Turner-Moss et al., 2013).

Similarly, a high prevalence of violence was reported by studies that sampled trafficked people in contact with clinical services, including sexual and mental health services and emergency departments (Varma 2015, Oram 2015, Dal Conte & Di Perri, 2011). Sexual violence was reported by one-fifth of women in contact with sexual health services in Italy and documented for 73% women and 51% of children in contact with mental health services (Dal Conte & Di Perri, 2011, Oram, 2015). Physical violence was documented for 40% of children accessing emergency departments, and 57%, 72% and 60% of women, men, and children in contact with mental health services (Dal Conte & Di Perri, 2011, Oram, 2015). However, these figures may capture violence that took place before, during or after the trafficking situation.

Mental health

Fifteen studies reported on the mental health of trafficked people: nine on diagnosed or probable depression, anxiety, or PTSD; one on complex PTSD, and three on clinically significant symptoms of psychological distress (Table 3).

Trafficked women: Two studies used diagnostic instruments to assess mental disorders (Abas et al., 2013; Kissane et al., 2014) and two reported on clinical diagnoses that were assigned by mental health professionals (Oram et al., 2015; Varma et al., 2015). Abas et al. (2013), using the SCID to diagnose mental disorder among women in contact with post-trafficking services in Moldova, reported that 55% of the sample met diagnostic criteria for mental disorder at an average of 6 months after return, including PTSD (36%), depression (13%) and anxiety disorder (6%). Oram et al. (2015), reporting on a sample of 78 trafficked women in contact with secondary mental health services in England, reported that the most prevalent diagnoses were depression (32%), PTSD and severe stress and adjustment disorders (28%), and schizophrenia and related disorders (9%).

The remaining eight papers used screening instruments to assess probable disorder and varied considerably in their estimates (see Table 6). The pooled prevalence estimates were 50% for symptoms of anxiety (95% CI 21.9-78.2%), 52.4% for depression (95% CI 33.9-70.8%) and 31.6% for PTSD (95% CI 8.3-54.9%), but these estimates were associated with high heterogeneity (I^2=97.0-98.5%) (Figure 2).

Trafficked men: Three studies reported on the mental health of trafficked men. Two used screening instruments and reported high levels of symptoms of anxiety (21.7 - 48.3%), depression (20.8 - 60.6%) and PTSD (15.8 – 46.2%) (Kiss et al, 2015, Turner-Moss et al, 2013). Oram et al. (2015), reporting on a sample of 19 trafficked men in contact with secondary mental health services, indicated the most prevalent diagnoses were depression (21%), PTSD and severe stress and adjustment disorders (26%), and schizophrenia and related psychoses (37%).

Trafficked children: High levels of mental health problems were similarly reported for trafficked children. A study of trafficked children accessing emergency medical services in the United States identified 38.5% had a history of mental disorder, although it is unclear what proportion of this preceded versus followed the trafficking experience (Varma et al., 2015). A survey conducted in South East Asia using screening instruments

found 32.3% had probable anxiety, 57.3% probable depression, and 26.5% probable PTSD. Among 35 trafficked children in contact with secondary mental health services in England, the most common diagnoses were PTSD, severe stress and adjustment disorders (27%) and affective disorders (27%). Other diagnoses included anxiety, conduct disorder and schizophrenia (Oram et al., 2015).

Risk factors for mental health problems: Table 4 describes risk factors for poor mental health among trafficked people that included factors occurring prior to, during, and after trafficking: childhood sexual abuse; sexual and physical violence while trafficked, poor living and working conditions, restrictions on movement, and longer duration of exploitation; and unmet social needs after escaping exploitation (Abas et al., 2013; Hossain et al, 2010; Kiss et al., 2015). Le (2015) reported that the total severity of violence, as indicated by a composite score of physical, sexual, emotional and labour abuse and forced alcohol use, was predictive of the level of psychological distress among women in contact with post-trafficking services in Vietnam. Higher levels of post-trafficking support were suggested to be associated with a reduced risk of mental disorder (AOR = 0.64, 95% CI 0.52-0.79; Abas et al., 2013).

Substance abuse

Four studies collected data on substance misuse and indicated a high prevalence of drug and alcohol use among men, women and children that had been trafficked (Table 6). It is unclear whether participants were coerced to use drugs or alcohol whilst trafficked (Le, 2015) or whether they were using substances as a coping strategy during or after escaping the trafficking situation.

Physical health

Data on the physical health of people who have been trafficked were drawn from six studies that collected data on the self-reported symptoms of survivors in contact with post-trafficking services (Table 5). Five were conducted with samples of women and girls trafficked for sexual exploitation; the most commonly reported physical health symptoms were headaches (60% - 83%), back pain (51%-69%), stomach pain (53-61%), dental pain (58%), fatigue (81%) and dizziness (55-70%). Two studies reported on the physical health of trafficked men and children: a large multi-country survey in South East Asia and a small case series conducted in the UK (Kiss et al., 2015; Turner Moss et al., 2013). The prevalence of physical health symptoms was lower than has been reported for women trafficked for sexual exploitation, but the symptoms most frequently endorsed were similar, including headache, back pain, dental pain, fatigue, and memory problems.

Sexual health

HIV

The prevalence of HIV infection was reported by eight studies: three with trafficked and non-trafficked sex workers and four with women accessing post-trafficking support (Table 6). Data from serological tests with trafficked and non-trafficked sex workers indicate an HIV prevalence in the trafficked women ranging from 6.5% from a study in Mexico (Goldenberg et al., 2013) to 34.3% for a study in India (Wirth et al., 2013), with a pooled prevalence estimate of 18.1% and high heterogeneity (95% CI 0.5-35.7%, I^2=99.2%). Pooled estimates also suggested increased odds of HIV infection among trafficked versus non-trafficked sex workers (OR 1.96, 95% CI 1.11- 3.47, I^2=54.5% Figure 3). Wirth et al. (2013) reported that odds of HIV infection among trafficked women with forced entry into prostitution was strongly associated with recent experiences of sexual violence (OR=11.13, 95% CI 2.41-51.40). No association was found between age at entry into prostitution and HIV, and this was not modified by sexual violence (OR=0.94, 95% CI 0.28 -3.13).

The review did not identify any further studies reporting on serological test results for HIV among women accessing post-trafficking support published since Oram et al's review. Estimates of the HIV prevalence range from 22.7% to 45.8% (Falb et al., 2011; Gupta et al., 2009; Silverman et al., 2006; Silverman et al., 2007), with a pooled prevalence estimate of 31.9% (95% CI 21.3-42.2%) (Figure 4). Two studies suggested that longer duration of exploitation may be associated with increased odds of infection (Silverman et al 2006, Silverman et al 2007), and a potential association between odds of infection and the HIV prevalence in the geographical areas to or from which women had been trafficked. Inconsistent findings were reported with respect to age when trafficked. Only one study reported HIV prevalence among women trafficked for labour exploitation (Tsutsumi et al 2008). Their estimate of 0% was obtained by self-report and should be treated with caution, as 80% did not know their HIV status.

Sexually Transmitted Infections

Four studies reported on the results of serological tests for individual sexually transmitted infections (STI), with substantial variation in prevalence (Table 7). A further nine studies reported the prevalence of self-reported symptoms of STI, which ranged from 5.7% in a study of sexually exploited women in Israel to 65.9% in a cross-sectional survey of trafficked sex workers in Thailand. Five of these nine reported the odds of self-reported STI symptoms among trafficked versus non-trafficked sex workers; none reported a significant difference (Cwikel et al., 2004; Decker et al., 2011; George & Sabarwal, 2013; Goldenberg et al., 2013, Silverman et al., 2014).

Discussion

Key findings

This review highlights the high prevalence of mental, physical, and sexual health problems among trafficked people who were exploited in various settings and industries. The review also draws attention to the high levels of physical and sexual violence experienced by trafficked people, including by trafficked children. This review re-emphasises that trafficked men and trafficked children and people trafficked for labour exploitation are underrepresented in research on health and human trafficking. However, emerging evidence indicates a high burden of mental and physical health problems among these groups.

Recent studies have begun to investigate risk factors for poor mental and sexual health outcomes for trafficked people. Risk of mental disorder appears to be increased by multiple factors, including violence prior to and during trafficking, restricted freedom and poor living and working conditions while trafficked, and social support and unmet social needs following escape. These findings are consistent with the broader literature on trauma and risk of adverse reactions, particularly PTSD, which suggests the cumulative risk of multiple traumatic events and the importance of post-trauma social support (Brewin, Andrews & Valentine, 2000; Ozer, Best, Lipsey & Weiss, 2003). It is also noteworthy that the physical pain or discomfort most frequently endorsed by trafficked people, including headache, stomach pain, and memory problems, are non-specific and could be related to either physical or psychological problems. Mental health problems appear to be enduring, with studies reporting a high prevalence of diagnosed disorder several months post-trafficking (Abas et al 2013) and a slower decline in symptoms than for physical health problems (Zimmerman, Hossain, Yun, Roche, Morison & Watts, 2006). Further research should explore the pathways through which trafficking impacts mental health to inform interventions to promote recovery. Similarly, research is urgently needed to identify and test the effectiveness of psychological interventions to support the mental health of trafficked populations.

Violence may also increase risk of HIV infection (Stockman et al., 2013; Wirth et al., 2013). Studies suggest that women and girls trafficked for sexual exploitation are at increased risk of physical and particularly sexual violence as compared to non-trafficked sex workers at initial entry into sex work (Decker et al., 2011; George & Sabarwal, 2013; Gupta et al., 2011; Sarkar et al., 2008; Silverman et al., 2011; Silverman et al., 2014; Wirth et al., 2013). These studies begin to address calls made in the previous review for research to compare health risks among trafficked and non-trafficked sex workers. Yet, this review highlights the scarcity of current evidence on the health of what is now recognised as a very large global population of abused and exploited persons. To strengthen post-trafficking support, robust findings are still needed on differences in mental and physical health outcomes and other types of health risks between men, women and children and to compare the risks and health outcomes of people identified as trafficked and those working in the same industries who were not identified as trafficked, especially individuals working in sectors known for extreme forms of exploitation.

Strengths and Limitations of the review

The review used a comprehensive search strategy, independent screening and quality appraisal of studies, and adhered to PRISMA reporting guidelines. Doctoral theses were included, as were studies published in languages other than English. However, methodological problems at the level of the primary studies also limit the conclusions that can be drawn from this review. Most studies used non-probability sampling and did not provide information on the representativeness of their samples, limiting generalisability. Half of the included studies were conducted with people recruited from post-trafficking support services, and it is unlikely their experiences represent those of all trafficked people, many of whom probably do not in contact with support

services. It is unclear whether those accessing support represent more severe cases of abuse and have more extreme health needs, or conversely, if they represent a sample that is healthier and has greater access to resources, and is therefore able to contact services. Similarly, it is unclear how trafficking identification criteria might have differed by location and/or over time. Likewise, studies with sex industry samples may under-represent those experiencing the highest levels of abuse and restrictions of movement, which would likely limit their ability to participate in the study. The four studies with clinical populations likely overestimate the population-level prevalence of violence and physical, sexual and mental health problems. None of the studies were able to capture accurately people's psychological history prior to trafficking and the possible influence on current symptoms. In the context of a limited number of studies, however, it is not possible to estimate the direction or scale of these potential selection biases with certainty. Estimates of pooled prevalence and risk of HIV amongst women trafficked for sexual exploitation are drawn from a very small number of studies from South and Southeast Asia and Mexico, and were associated with high levels of heterogeneity. It is uncertain to what extent these findings can be generalised to other populations as they likely to be related to local prevalence rates and dynamics of HIV infection.

The comparability of studies and reliability of findings was further limited by diversity of methods and tools used to assess experiences of violence and various health outcomes. Only two studies used diagnostic interviews to assess mental disorder and none used unmodified validated instruments to assess violence and physical health outcomes amongst trafficked people. There is a critical need to develop validated instruments for use with trafficked populations to ensure future studies can produce more rigorous, valid and comparable data.

Definitional differences in trafficking exposure were also apparent in the primary studies. Ten studies categorised women as having been trafficked if they reported being younger than 18 years upon entering the sex industry, regardless of the means of their recruitment. Other studies explicitly operationalised trafficking if the study authors determined that force or coercion was present. Studies that analysed the experiences of violence and health outcomes separately for women who entered the sex industry aged younger than 18 and for women who had been forced or coerced into sex work found differing prevalence of violence and health problems associated with each, suggesting that these definitional differences may result in significant variation in outcomes of interest (Gupta et al., 2011; Wirth et al., 2013; Silverman et al., 2014). Fifteen of the 37 studies reported on trafficked people in contact with post-trafficking support services in their countries of origin. However, these services varied greatly, from small grassroots non-governmental organisations to official service providers such as those provided by the International Organization for Migration (IOM). Support eligibility criteria varied both by type of exploitation, with some services only supporting survivors of sex trafficking, some only for women or children or men, some serving a broader range of survivors, and yet others setting different thresholds for service access services and operationalising legal definitions of trafficking in their own terms. These differences limit the comparability of findings from within the post-trafficking support service samples.

Conclusion

Research on the health consequences of trafficking is an emerging area of study that is fundamental to developing well-informed mechanisms of identifying, referring, and caring for this population These findings, even with their limitations, clearly indicate that human trafficking is a severe form of abuse that occurs in many corners of the globe and which has serious and often long-lasting health problems, including enduring mental distress. The next critical step to respond to the most pressing health needs of trafficked people is to investigate potentially effective psychological interventions to help this highly vulnerable group move beyond their real-life nightmares.

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Conflicts of Interest

SO is lead author on two of the papers included in this review and co-author on further two. CZ is lead author on one paper included in this review and co-author on a further three. LMH, LO and SH declare no conflicts of interest.

Ethical standards

Ethical approval was not required for this work.

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Supplementary materials

Figure 1. PRISMA Flow Diagram for systematic literature review update (January 2011 -> 17 April 2015).

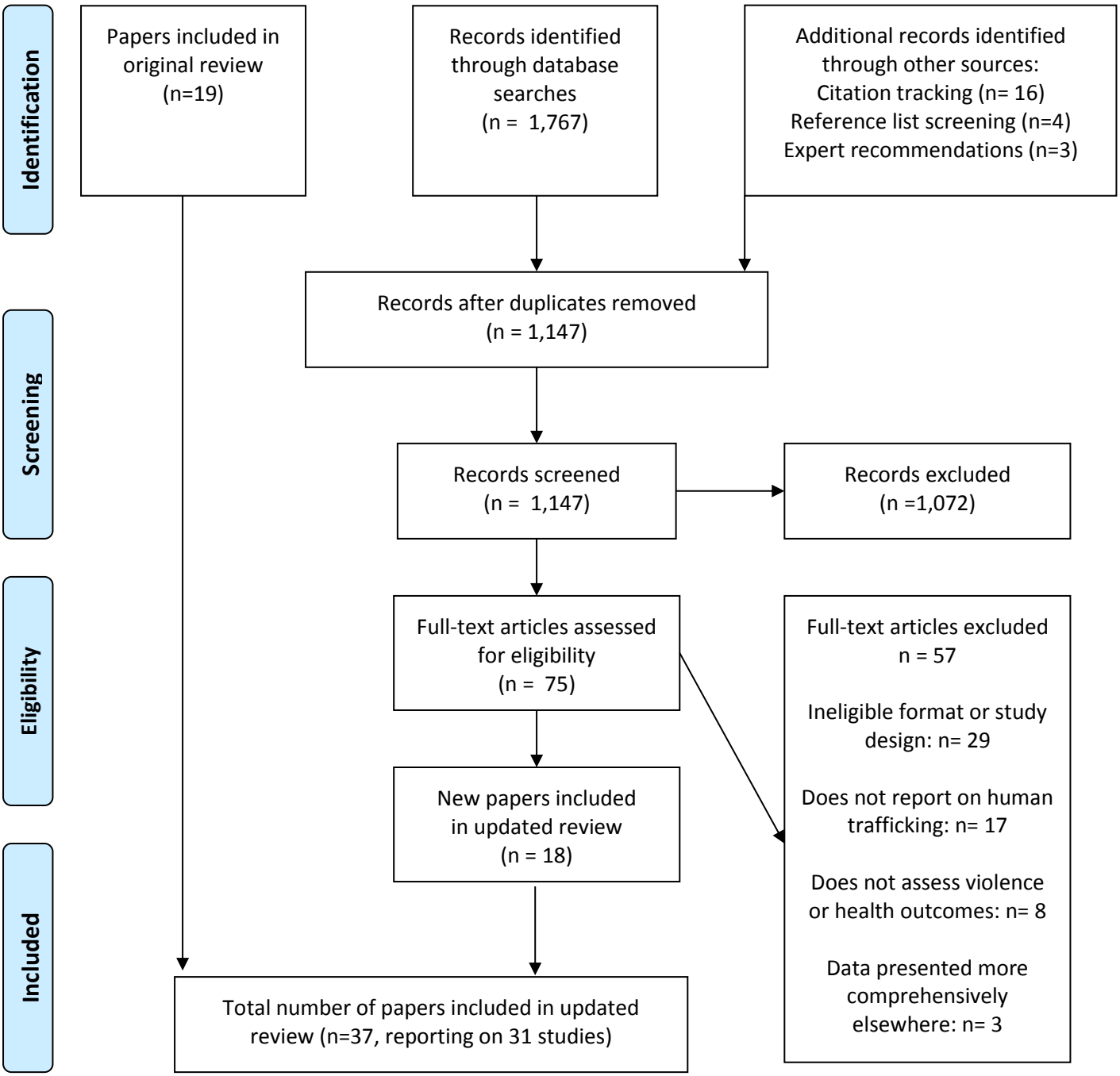

Figure 2. Forest plot displaying DerSimonian and Laird weighted random-effect pooled prevalence estimates for prevalence of self-reported symtoms of anxiety, depression and PTSD among trafficked women.

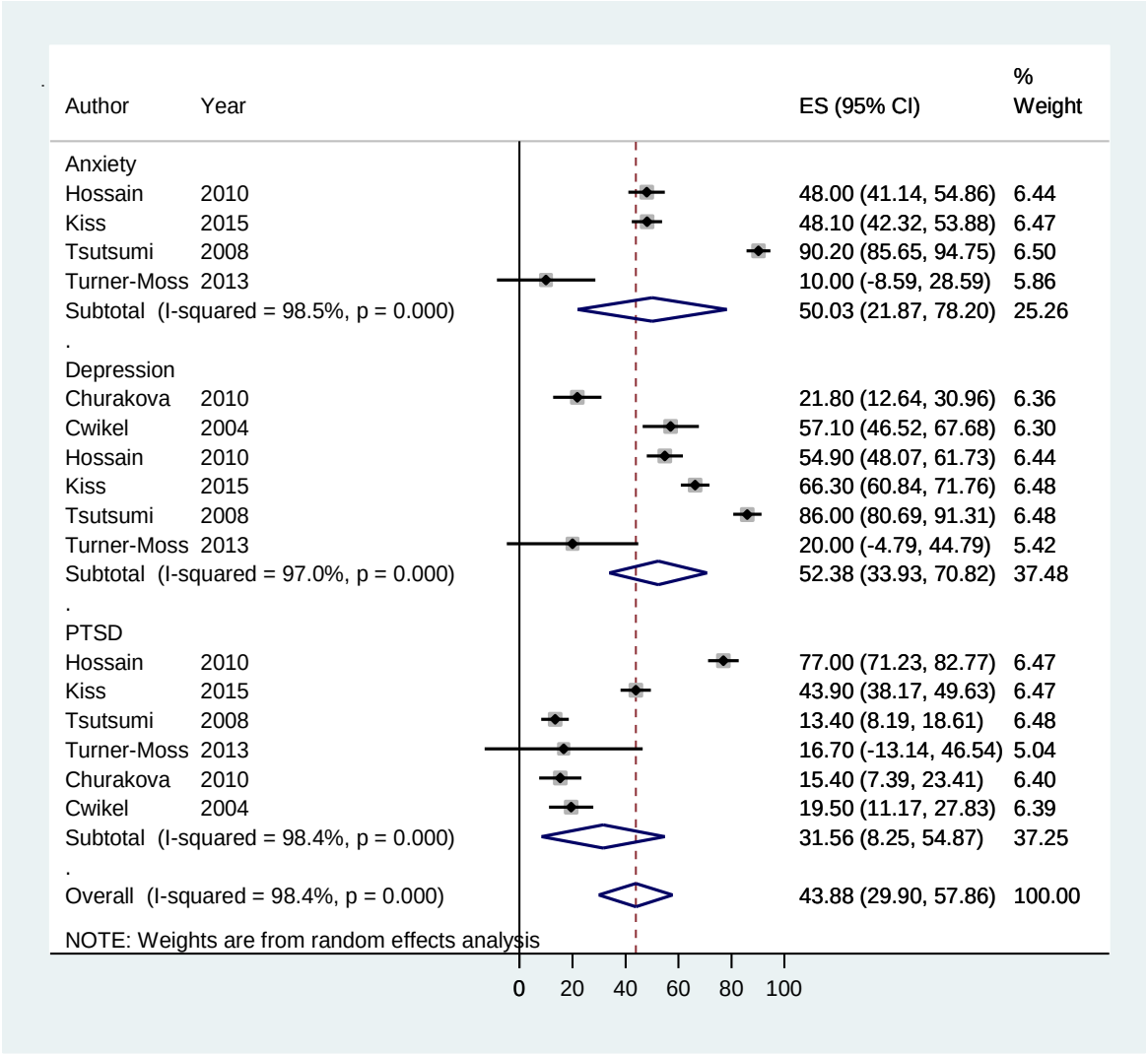

Figure 3. Forest plot displaying DerSimonian and Laird weighted random-effect pooled odds estimates for prevalence of HIV infection among trafficked women currently working in the sex industry in India and Mexico.

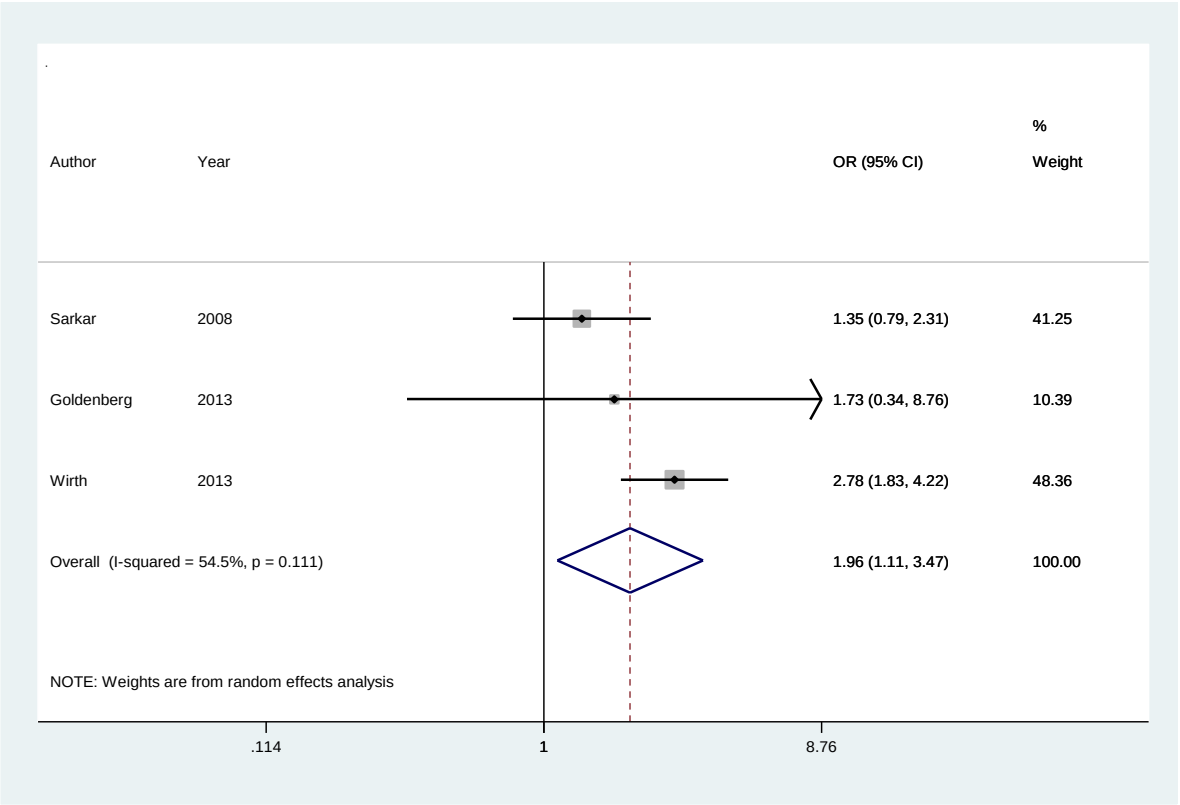

Figure 4. Forest plot displaying DerSimonian and Laird weighted random-effect pooled prevalence estimates for prevalence of HIV infection among sex trafficked women currently in contact with post-trafficking services in India and Nepal.

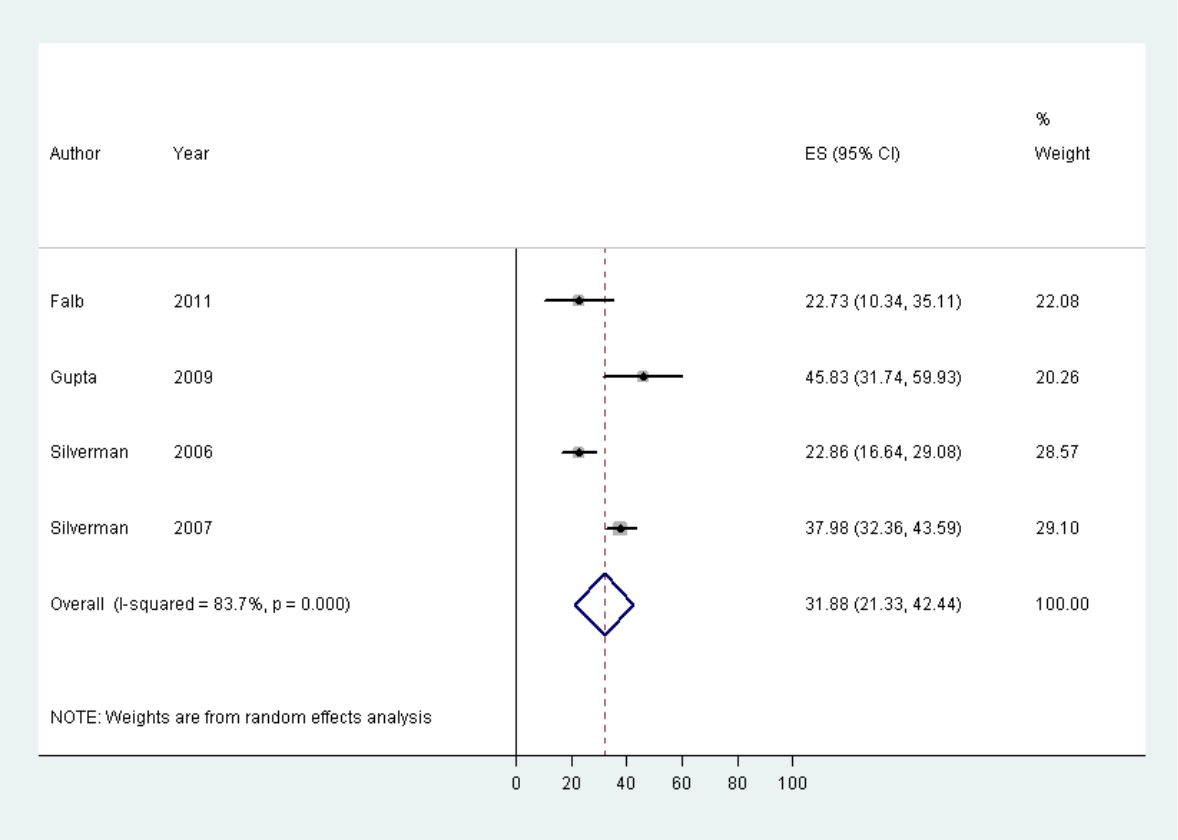

Table 1: Characteristics of included studies (31 studies, reported by 37 papers).

Author and year	Study design	Sample	Outcomes of interest	Method of assessing outcomes	Definition of trafficking	Country	Quality score*
Abas 2013	Cross-sectional survey conducted 2-12 months post entry	N=120 sexually and labour exploited females who accessed NGO post-trafficking support services.	Mental health	Mental health assessed at baseline by a psychiatrist using ICD-10 criteria and at follow-up by a psychiatrist using the Structured Clinical Interview (SCID) for DSM-IV Axis I Disorders.	Defined solely as female post-trafficking service users.	Moldova	Total: 23/30 Selection quality: 4/6 Measurement quality: 4/6
Oram 2012	Cross sectional survey.	N=120 sexually and labour exploited females who accessed NGO post-trafficking support services.	Physical health	Physical health assessed using adapted version of the Miller Abuse Physical Symptoms and Injury Survey.	Female post-trafficking service users screened using standardised questionnaires, in accordance with UN Protocol.	Moldova	Total: 23/30 Selection quality: 4/6 Measurement quality: 4/6
Ostrovschi 2011 []	Cohort study; mental health assessed 1- 5 days after registering with support service and re-assessed 2-12 months later.	N=120 sexually and labour exploited females who accessed NGO post-trafficking support services.	Mental health.	Mental health assessed at baseline by a psychiatrist using ICD-10 criteria and at follow-up by a psychiatrist using the Structured Clinical Interview (SCID) for DSM-IV Axis I Disorders.	Defined solely as female post-trafficking service users.	Moldova	Total: 21/30 Selection quality: 4/6 Measurement quality: 3/6
Churakova 2010	Case-control study.	N=78 sexually exploited females who accessed NGO post-trafficking support services.	Mental health.	Mental health assessed using the Beck Depression Inventory (depression) and the Clinician-Administered PTSD Scale (PTSD).	Defined solely as female post-trafficking service users.	Russia	Total : 11/30 Selection quality: 1/6 Measurement quality: 2/6
Crawford 2008 []	Case file review (20 of 80 eligible records randomly selected for	n=20 sexually exploited adolescent females receiving post-trafficking NGO	Physical health; Sexual health;	Physical and sexual health problems assessed by caseworkers who had “only basic training” and “not based on standard diagnostic	Defined solely as female child and adolescent post-trafficking service	Nepal	Total: 14/30 Selection quality: 2/6

	review).	support.		criteria".	users.		Measurement quality: 0/6
Cwikel 2004 []	Case control study.	n=102 sexually exploited females (47 awaiting deportation and 55 working in brothels). 92 women are defined as trafficked: 47 from deportation sample and 45 from brothel sample.	Violence; Physical health; Mental health ; Sexual health.	Violence assessed using standardised (non-validated) questions. Physical health assessed using standardised (non-validated) questions. Sexual health (STI) assessed using standardised (non-validated) questions. Mental health assessed using the Centre for Epidemiologic Studies Depression Scale (depression) and the PSTD Checklist-Civilian Version (PTSD).	Illegally working in Israel in the sex industry.	Israel	Total: 15/30 Selection quality: 0/6 Measurement quality: 2/6
Dal Conte 2011[]	Case file review.	N=1,400 females brought to sexual health clinic by NGO post-trafficking support services	Violence; Sexual health.	Sexual health (HIV, syphilis, Hepatitis B, gonorrhoea, chlamydia and trichomonas) based on reported results from serological tests.	Defined solely as female patients brought in by trafficking support services.	Italy	Total: 13/30 Selection quality: 2/6 Measurement quality: 3/6
Decker 2011 []	Cross sectional survey.	N=815 female sex workers working in a variety of sex work venues. 85 women are defined as trafficked: 13 reported being forced or deceived into sex work.	Violence; Sexual health.	Workplace violence/ mistreatment in the past week assessed using standardised (non-validated) questions. Sexual health assessed using syndromic STI assessment.	Entry into sex work under the age of 18 and/or due to being forced or deceived.	Thailand	Total: 21/30 Selection quality: 4/6 Measurement quality: 2/6
Decker 2009 []	Cross sectional survey.	N=92 female sex workers accessing	Violence.	No details provided for the instrument/questions used to	Entry into sex work under the age of 18	Nicaragua	Total: 12/30

		healthcare from an NGO. 64 women are defined as trafficked; 38 reported being forced or deceived into sex work.		assess violence from clients in the past month.	and/or due to being forced or deceived.		Selection quality: 0/6 Measurement quality: 2/6
Di Tommasso 2009 []	Case file review.	N=4.559 sexually exploited females who accessed NGO post-trafficking support services.	Violence.	No details provided for the instrument/questions used to assess violence.	Defined solely as female post-trafficking service users.	Multi-country	Total: 16/30 Selection quality: 2/6 Measurement quality: 2/6
Falb 2011 []	Case file review.	N=188 sexually exploited females who accessed NGO post-trafficking support services.	HIV/AIDS	HIV/AIDS assessment based on the results of serological tests as reported in case files.	Entry into sex work under the age of 18 and/or due to being forced, coerced or deceived or abducted.	India	Total: 6/30 Selection quality: 0/6 Measurement quality: 2/6
George 2013	Cross sectional survey.	N=1137 female sex workers associated with local NGO. 574 were defined as trafficked. 173 were coerced or forced into sex work.	Violence; Sexual health.	Violence assessed using standardised, non-validated questions. Sexual health assessed based on self-reported symptoms.	Entry into sex work under the age of 18 and/or due to being forced or coerced.	India	Total: 24/30 Selection quality: 4/6 Measurement quality: 5/6
Goldenberg 2013	Cross sectional survey.	N=214 female sex workers working in a variety of sex work venues. 31 defined as trafficked.	Violence; Sexual health.	Violence assessed using standardised (non-validated) questions. Sexual health (HIV, gonorrhoea, syphilis and chlamydia) assessment based on reported results from serological tests.	Involuntary sex work due to being sold, traded, or forced to exchange sex at the orders of another person.	Mexico	Total: 19/30 Selection quality: 4/6 Measurement quality: 3/6

Gray 2012	Cross sectional survey.	N=approximately 24 sexually and labour exploited females who accessed NGO post-trafficking support services.	Mental health	Mental health assessed using the Hopkins Symptoms Checklist-25 (depression, anxiety).	Defined solely as female post-trafficking service users.	Cambodia	Total: 13/30 Selection quality: 0/6 Measurement quality: 3/6
Gupta 2011 []	Cross sectional survey.	N=812 female sex workers participating in a community-based HIV study. 157 women are defined as trafficked; 60 reported being forced or deceived into sex work.	Violence.	Violence assessed using questions modified from the Conflict Tactics Scale.	Entry into sex work under the age of 18 and/or due to being lured, cheated or forced.	India	Total: 23/30 Selection quality: 3/6 Measurement quality: 3/6
Gupta 2009 []	Case file review.	N=61 sexually exploited females who accessed NGO post-trafficking support services.	HIV/AIDS	HIV/AIDS assessment based on the results of serological tests (ELISA or Western Blot) as reported in case files.	Defined solely as female post-trafficking service users.	India	Total: 15/30 Selection quality: 3/6 Measurement quality: 2/6
Joarder 2014	Cross sectional survey.	N=476 illegal migrants. 386 considered trafficked.	Violence	Violence assessed using standardised (non-validated) questions to individual or head of household.	Experience of fraud, coercion, deceit, violation of contract, sexual assault or exploitation whilst working abroad.	Bangladesh	Total: 14/30 Selection quality: 3/6 Measurement quality: 3/6
Kiss 2015	Cross sectional survey.	N= 1015 men, women and children trafficked into a range of sectors	Physical health; Mental health; Violence	Violence assessed using standardised, non-validated questions. Physical health assessed using adapted version of the Miller Abuse	Defined solely as post-trafficking service users.	Cambodia, Thailand, Vietnam	Total: 27/30 Selection quality: 5/6 Measurement

				Physical Symptoms and Injury Survey. Mental health assessed using the Hopkins Symptoms Checklist-25 (depression, anxiety) and the Harvard Trauma Questionnaire (PTSD).			quality: 5/6
Kissane 2014	Cross sectional survey.	N=29 asylum seekers accessing support of NGO. 8 defined as trafficked.	Mental health	Complex posstraumatic stress disorder assessed using Structured Interview for Disorders of Extreme Stress.	Defined as victims of human trafficking based on United Nations and Home Office definitions.	United Kingdom	Total: 20/30 Selection quality: 2/6 Measurement quality: 4/6
Le 2014	Cross sectional survey.	N=73 females who accessed NGO post-trafficking support services.	Mental health; Violence.	Violence assessed using standardised, non-validated questions. Mental health assessed using the Self Reporting Questionnaire-20.	Defined solely as post-trafficking service users.	Vietnam	Total: 26/30 Selection quality: 3/6 Measurement quality: 6/6
McCauley 2010 []	Case file review	N=136 sexually exploited females who accessed NGO post-trafficking support services.	Violence; Sexual health.	No details provided for the instrument/questions used to assess violence. No details provided for the instrument/questions used to assess self-reported STI.	Entry into sex work under the age of 18 and/or due to being tricked or forced.	Cambodia	Total: 12/30 Selection quality: 2/6 Measurement quality: 0/6
Oram 2015	Cross sectional survey.	N=133 men, women and children trafficked into a range of sectors	Mental health	Mental health assessed and ICD-10 diagnosis assigned by clinicians.	Defined as patients whose clinical notes indicated they had been trafficked.	United Kingdom	Total: 22/30 Selection quality: 3/6 Measurement quality: 4/6
Sarkar 2008 []	Cross sectional survey	N=580 female sex workers working in	Violence; HIV/AIDS	Violence assessed using standardised (non-validated)	Entry into sex work due to being	India	Total: 20/30

		sex work venues. 185/580 (31.5%) sample are defined as trafficked.		questions. HIV/AIDS assessed using serological tests (ELISA and tri-dot).	cheated, forced, or sold by their families.		Selection quality: 2/6 Measurement quality: 4/6
Servin 2015	Cross sectional survey.	N=20 female sex workers working in a variety of sex work venues.	Sexual health	HIV and other STI assessment based on the results of serological tests.	Entry into sex work under the age of 18.	Mexico	Total: 17/30 Selection quality: 1/6 Measurement quality: 3/6
Silverman 2007 []	Case file review.	N=287 sexually exploited females who accessed NGO post-trafficking support services.	HIV/AIDS.	HIV/AIDS assessment based on the results of serological tests (ELISA, Western blot, or rapid testing for HIV-I and HIV-II) as reported in case files.	Entry into sex work due to force or coercion.	Nepal	Total: 20/30 Selection quality: 4/6 Measurement quality: 4/6
Silverman 2008 []	Case file review.	N=246 sexually exploited females who accessed NGO post-trafficking support services.	HIV/AIDS Sexual health (other)	HIV/AIDS assessment based on the results of serological tests (ELISA, Western blot, or rapid testing for HIV-I and HIV-II) as reported in case files. Sexual health (syphilis and hepatitis B) assessment based on reported results from serological tests (Venereal Disease Research Laboratory test, detection of hepatitis B surface antigen).	Entry into sex work due to force or coercion.	Nepal	Total: 20/30 Selection quality: 4/6 Measurement quality: 4/6
Dharmadhikari 2009 []	Case file review.	N=287 sexually exploited females who accessed NGO post-trafficking support services.	HIV/AIDS Physical health	HIV/AIDS assessment based on the results of serological tests (ELISA, Western blot, or rapid testing for HIV-I and HIV-II) as reported in case files. TB assessment based on reported	Entry into sex work due to force or coercion.	Nepal	Total: 15/30 Selection quality: 2/6 Measurement quality: 1/6

				results from sputum smears for acid-fast bacilli, radiographs or histories.			
Silverman 2011 []	Cross sectional survey.	N=211 HIV-infected female sex workers accessing support from a sex-worker led community organisation. 88/211 (41.7%) sample are defined as trafficked.	Violence.	Violence in the first month of sex work assessed using non-validated standardised questions.	Entry into sex work due to force or coercion.	India	Total: 19/30 Selection quality: 1/6 Measurement quality: 5/6
Silverman 2014 []	Cross sectional survey.	N=211 HIV-infected female sex workers accessing support from a sex-worker led community organisation. N=88 (41.7%) reported being forced or deceived into sex work.	Sexual health; Violence.	Sexual health (STI) assessed using standardised (non-validated) questions. Violence in the last 12 months assessed using non-validated standardised questions.	Entry into sex work due to force or coercion or under the age of 18.	India	Total: 23/30 Selection quality: 4/6 Measurement quality: 5/6
Silverman 2006 []	Case file review.	N=175 sexually exploited females who accessed NGO post-trafficking support services.	HIV/AIDS	HIV/AIDS assessment based on the results of serological tests (ELISA or rapid testing for HIV-I and HIV-II) as reported in case files.	Entry into sex work due to force or coercion.	India	Total: 17/30 Selection quality: 3/6 Measurement quality: 3/6
Tsutsumi 2008 []	Cross sectional survey.	N=164 sexually and labour exploited females who accessed NGO post-trafficking support services.	Mental health; HIV/AIDS	Mental health assessed using the Hopkins Symptoms Checklist-25 (depression, anxiety) and the PTSD Checklist Civilian Version (PTSD). HIV/AIDS assessment based on self-report.	Defined solely as female post-trafficking service users.	Nepal	Total: 19/30 Selection quality: 3/6 Measurement quality: 3/6

Turner-Moss 2013	Case file review.	N=35 men and women trafficked for labour exploitation.	Physical health; Mental health; Violence.	Physical health assessed using adapted version of the Miller Abuse Physical Symptoms and Injury Survey. Mental health assessed using the Brief Symptom Inventory (depression, anxiety) and the Harvard Trauma Questionnaire (PTSD). Violence assessed using standardised, non-validated questions.	Defined as post-trafficking service users.	United Kingdom	Total: 16/30 Selection quality: 2/6 Measurement quality: 3/6
Urada 2014	Cross sectional survey.	N=770 female sex workers working in a variety of sex work venues. 56 defined as trafficked.	Sexual health;	Sexual health (STI) assessed using standardised (non-validated) questions.	Entry into sex work under the age of 18.	Philippines	Total: 21/30 Selection quality: 4/6 Measurement quality: 3/6
Varma 2015	Case file review.	N=84 children presenting in ED or child protection clinic. 27 defined as trafficked.	Mental health; sexual health; Violence.	Physical, mental and sexual health assessed using standardised (non-validated) questions. Violence assessed using standardised, non-validated questions.	Defined as victims of child sex trafficking based on Institute of Medicine and National Research Council definition.	United States	Total: 19/30 Selection quality: 3/6 Measurement quality: 4/6
Wirth 2013	Cross sectional survey.	N=1,184 female sex workers working in a variety of sex work venues. 372 defined as sex trafficked. 107 reported being	HIV/AIDS Violence.	HIV/AIDS assessment based on the results of serological tests (ELISA). Violence assessed using standardised, non-validated question.	Entry into sex work due to force or coercion or under the age of 18.	India.	Total: 21/30 Selection quality: 4/6 Measurement quality: 5/6

		forcibly prostituted.					
Zimmerman 2008 []	Cross sectional survey conducted at 0-14, 28-56, and 90+ days after entry into support.	N=192 sexually exploited females who accessed NGO post-trafficking support services.	Violence; Physical health; Mental health; Sexual health.	Violence assessed using standardised, non-validated questions. Physical health assessed using adapted version of the Miller Abuse Physical Symptoms and Injury Survey. Mental health assessed using the Brief Symptom Inventory (depression, anxiety) and the Harvard Trauma Questionnaire (PTSD). Sexual health assessed based on self-reported symptoms.	Defined solely as female post-trafficking service users.	Belgium, Bulgaria, Czech Republic, Italy, Moldova, Ukraine, UK	Total: 20/30 Selection quality: 4/6 Measurement quality: 1/6
Hossain 2010 []	Cross sectional survey conducted at 0-14, 28-56, and 90+ days after entry into support.	N=204 sexually exploited females who accessed post-trafficking support services.	Violence; Mental health	Violence assessed using standardised, non-validated questions. Mental health assessed using the Brief Symptom Inventory (depression, anxiety) and the Harvard Trauma Questionnaire (PTSD).	Defined solely as female post-trafficking service users.	Belgium, Bulgaria, Czech Republic, Italy, Moldova, Ukraine, UK	Total: 24/30 Selection quality: 5/6 Measurement quality: 3/6

* The quality appraisal instrument (see Appendix 3) has 15 questions. Papers received a score of between 0 and 2 for each question, giving a maximum total score of 30. Scores for two sub-domains - the quality of studies' sampling strategies and the quality of measurements – are presented alongside the total quality score. Scores for other sub-domains are not shown.

Table 2: Prevalence and risk of violence whilst trafficked (n=18)

Author and year	Type of Violence	Frequency of violence (Trafficked people)	Frequency of violence (Controls)	Odds ratio and 95% CI
Sex industry samples				
Cwikel 2004 []	Physical assault at work	30/93 (32.3%)	2/10 (20.0%)	1.9 (0.35 - 19.4)
	Sexual assault at work	20/93 (31.2%)	1/10 (10.0%)	2.5 (0.31–113.4)
Decker 2011 []	Physical, sexual or psychological violence or mistreatment at work in the past week.	44/85 (51.8%)	254/730 (34.8%)	2.0 (1.25 – 3.24)
	Sexual violence at initiation into sex work.	10/85 (11.8%)	26/730 (3.6%)	3.6 (1.49 – 8.09)
Decker 2009 []	Physical or sexual violence from a client in the past month.			
	a) Entry age <18 or forced or deceived into sex work	31/62 (50.0%)	10/28 (35.7%)	1.8 (0.66 – 5.08)
	b) Entry <18 yrs	20/38 (52.6%)	10/28 (35.7%)	2.0 (0.66 – 6.18)
	c) Forced or deceived into sex work	17/37 (45.9%)	10/28 (35.7%)	1.53 (0.50 – 4.76)
George 2013 []	Physical violence (past 6 months)	280/574 (48.8%)	322/563 (57.2%)	0.90 (.067-1.22)
	Sexual violence (past 6 months)	477/574 (83.1%)	394/563 (70.0%)	2.09 (1.42 – 3.06)
	Physical or Sexual Violence (past 6 months)	501/574 (87.3%)	460/563 (81.7%)	1.93 (1.24-3.01)
Gupta 2011 []	Any violence in the past 6 months			
	a) Entry age <18 or forced or deceived into sex work	84/157 (53.5%)	256/655 (39.1%)	1.79 (1.26-2.54)
	b) Entry <18 yrs, not forced or deceived into sex work	50/96 (52.1%)	256/655 (39.1%)	1.69 (1.08 – 2.67)
	c) Entry age <18 yrs and forced or deceived into sex work	16/26 (61.5%)	256/655 (39.1%)	2.49 (1.04 – 6.24)
	d) Entry >18 yrs and forced or deceived into sex work	18/34 (52.9%)	256/655 (39.1%)	1.75 (0.83 – 3.74)
Sarkar 2008 []	Physical, sexual or psychological violence in the first few months after entry into sex work.	105/183 (57.3%)	61/397 (15.3%)	7.4 (4.8 – 11.3)

Silverman 2011 []	Sexual violence in the first month after entry into sex work.	66/88 (75.0%)	66/123 (53.7%)	2.6 (1.4-4.7)
	Physical or sexual abuse in past year.			
	(a) Forced or deceived into sex work, regardless of age at entry	14/88 (15.9%)	19/123 (15.5%)	1.04 (0.49-2.20)
	(b) Entry age <18 yrs regardless of reasons for entry into sex work.	21/106 (19.6%)	12/105 (11.4%)	1.92 (0.89-4.13)
Wirth 2013 []	Sexual violence in past year among women forced into prostitution, regardless of age of entry	23/107 (21.1%)	218/1707 12.8%)	1.9 (1.1-3.0)
Post-trafficking support service samples				
Di Tommaso 2009 []	Any violence or material neglect while trafficked.	1350/1644 (82.1%)	-	-
Kiss 2015 []	Women:		-	-
	Physical violence while trafficked.	118/288 (41.3%)		
			-	-
	Sexual violence while trafficked.	125/288 (43.9%)		
			-	-
	Men:			
	Physical violence while trafficked.	188/383 (49.1%)		
	Sexual violence while trafficked.	5/383 (1.3%)		
	Children:			
	Physical violence while trafficked.	82/344 (23.8%)		
	Sexual violence while trafficked.	74/344 (21.5%)		
Le 2014 []	Physical violence while trafficked.	31/73 (43%)	-	-
	Sexual abuse while trafficked.	44/73 (60%)	-	-
	Emotional abuse while trafficked.	29/73 (40%)	-	-
McCauley 2010 []	Physical violence while trafficked.	13/136 (9.6%)	-	-
	Sexually abused while trafficked.	45/136 (33.1%)	-	-

Turner-Moss 2013 []	Women: Physical violence while trafficked. Men: Physical violence while trafficked.	4/7 (57.1%) 7/23 (30.4%)		
Zimmerman 2008 []	Physical or sexual violence while trafficked. Physical violence while trafficked. Sexual violence while trafficked.	182/192(94.8%) 145/192 (75.5%) 172/192 (89.6%)	- - -	- - -
Community and clinical samples				
Dal Conte 2011	Sexual violence	294/1400 (21%)		
Joarder 2014 []	Sexual harassment whilst trafficked.	Total sample 149/386 (38.6%) Males 0/231 (0%) Females 149/155 (96.0%)		
Oram 2015	Adult sample: Experiences of Adulthood Abuse[1] Physical or sexual Physical Sexual Child sample: Experiences of Childhood Abuse[1] Physical or sexual Physical Sexual	 58/96 (60.4%) 40/96 (41.7%) 43/96 (44.8%) 28/37 (75.7%) 22/37 (59.5%) 19/37 (51.4%)		
Varma 2015 []	History of fractures, loss of consciousness, wounds[a]. History of violence with sex[1].	2/5 (40.0%) 4/13 (30.8%)	7/12 (58.3%)[b] 2/53 (3.8%)	0.48 (0.06 - 3.99) 11.33 (1.80-71.32)

[a] Not clear from existing data whether this was in the context of trafficking or prior to trafficking experience.
[b] Control group are children who experienced sexual abuse/sexual assault (CSA)

Table 3: Prevalence and risk of mental distress among people who have been trafficked (n=15)

Author and year	Instrument and threshold used to assess mental distress	Frequency of mental distress (Trafficked people)	Frequency of mental distress (Controls)	Odds ratio and 95% CI
Anxiety				
Abas 2013 []	Diagnostic assessment using Structured Clinical Interview for DSM-IV disorders	Women: 7/120 (5.8%)	-	-
Hossain 2010 [	Brief Symptom Inventory mean score ≥1.87	Women: 98/204(48.0%)	-	-
Kiss 2015 []	Hopkins Symptoms Checklist 25 score ≥1·75	Women: 138/287 (48.1%) Men: 185/383 (48.3%) Children: 111/344 (32.3%)		
Tsutsumi 2008	Hopkins Symptoms Checklist 25 score ≥1·75	Women: 148/164 (90.2%) Sexual exploitation: 43/44 (97·7%) Labour exploitation: 105/120 (87·5%)	-	-
Turner-Moss 2013 []	Brief Symptom Inventory mean score ≥1.87	Women: 1/10 (10%) Men: 5/23 (21.7%)		
Depression				
Abas 2013 []	Diagnostic assessment using Structured Clinical Interview for DSM-IV disorders	Women: 15/120 (12.5%)	-	-
Churakova 2010 []	Beck Depression Inventory	Women: 17/78 (21.8%)	-	-
Cwikel 2004 []	Centre for Epidemiologic Studies Depression Scale mean score	Women: 48/84 (57.1%)	2/7 (28.6%)	3.33 (0.50 – 36.41)
Hossain 2010 []	Brief Symptom Inventory mean score ≥1.87	Women: 112/204(54.9%)	-	-
Kiss 2015 []	Hopkins Symptoms Checklist 25 score ≥1·75	Women: 191/288 (66.3%) Men: 232/383 (60.6%) Children: 197/344 (57.3%)	-	-
Oram	Clinically-assigned ICD-10	Women: 25/78 (32.1%))		

2015 []	diagnosis (psychiatric sample)	Men: 4/18 (22.2%) Children: 10/37 (27%)		
Tsutsumi 2008 []	Hopkins Symptoms Checklist 25 score ≥1·75	Women: 141/164 (86.0%) Sexual exploitation 44/44 (100.0%) Labour exploitation 97/120 (81.8%)	-	-
Turner-Moss 2013 []	Brief Symptom Inventory mean score ≥1.87	Women: 2/10 (20.0%) Men: 5/24 (20.8%)	-	-
Post-traumatic stress disorder				
Abas 2013 []	Diagnostic assessment using Structured Clinical Interview for DSM-IV disorders	Women: 43/120 (15.0%)		
Churakova 2010	Clinician-Administered PTSD Scale	Women: 12/78 (15.4%)	-	-
Cwikel 2004 []	PTSD Checklist Civilian Version score ≥ 50	Women: 17/87 (19.5%)	1/7 (14.3%)	1.46 (0.16 – 70.90)
Hossain 2010 []	Harvard Trauma Questionnaire, mean score ≥ 2.00	Women: 157/204 (77.0%)	-	-
Kiss 2015	Harvard Trauma Questionnaire, mean score ≥ 2.00	Women: 126/288 (43.9%) Men: 177/383 (46.2%) Children: 91/344 (26.5%)		
Oram 2015	Clinically-assigned ICD-10 diagnosis (psychiatric sample)	Women: 22/78 (28.2%) Men: 5/18 (27.8%) Children: 10/37 (27%)		
Tsutsumi 2008 []	PTSD Checklist Civilian Version score ≥ 50	Women: 22/164 (13.4%) Sexual exploitation 13/44 (29.5%) Labour exploitation 9/120 (7.5%)	-	-
Turner-Moss 2013 []	Harvard Trauma Questionnaire, mean score ≥ 2.00	Women: 1/6 (16.7%) Men: 3/19 (15.8%)		
Complex post-traumatic stress disorder				
Kissane 2014 []	Clinical interview using Structured Interview for Disorders of Extreme Stress	3/15[1] (20.0%)		
Psychological Distress				
Gray	Hopkins Symptoms	Women: 15/24 (62.5%)	-	-

2012	Checklist 25 score (≥1·75 indicative of anxiety or depressive disorder)			
Le 2014	Self-Reporting Questionnaire-20, mean score >7	Women: 47/73 (64.4%) Sexual exploitation 12/19 (63%) Marriage 10/13 (77%) Domestic Servitude 10/11 (91%) Other/Undeclared 15/30 (50%)		
Varma 2015 []	Mental disorder diagnosed by clinician on medical check-up in emergency department	Children: 10/26 (38.5%)	25/55 (45.5%)	p=0.553
Substance Misuse				
Goldenberg 2013 []	Heroin use	Women: 18/31 (58.1%)		
	Methamphetamine use	Women: 14/31 (48.3%)		
	Ever injected drugs	Women: 22/31 (71%)		
Oram 2015 []	Substance misuse problems (ever) (psychiatric sample)	Women: 16/78 (20.5%) Men: 7/18 (38.9%)		
Servin 2015 []	Heavy alcohol use	Women: 5/20 (25.0%)		
	Illicit drugs in past 6 months (heroin, crack, methamphetamine)	Women: 7/20 (33%)		
Varma 2015	History of drug & alcohol use	Children: 16/23 (69.6%)	10/52 (19.2%)	p<0.001
	History of multiple drug use	Children: 10/20 (50%)	3/52 (5.8%)	p<0.001

[1] Mixed sample, 86.7% female

[2] Control group are children who experienced sexual abuse/sexual assault (CSA)

Table 4: Risk factors for mental disorder among people who have been trafficked[1] (n=4)

Author and year	**Pre-trafficking sexual abuse**	**Duration of trafficking**	**Sexual violence**	**Threats**	**Serious violence/injury**	**Social support**	**Number of unmet needs**	**Time elapsed since escaping trafficking situation**
Abas 2013	+	+				-	+	
Hossain 2010	0	+	+	+	+			-
Kiss 2015 []		Nb. controlled for as confounder but association not reported	+ Included in definition of severe violence	+	+			
Le[2] 2014			+	+	+			

[1]A plus sign indicates a risk factor; a minus sign indicates that the factor had a protective effect; zero indicates it had no effect of either type; blank cells indicate the factor was not studied. The risk factors shown were examined for depression, anxiety, post-traumatic stress disorder and psychological distress as measured by SRQ-20.

[2] This study reported a Total Abuse Score, which combined sexual, physical, emotional, labour abuse and forced alcohol use, to be predictive of psychological distress.

Table 5: Physical symptoms reported by people who have been trafficked (n=6)

Author and year	Headache	Back Pain	Stomach Pain	Dental Pain	Fatigue	Memory problems	Weight Loss	Dizziness
Crawford 2008 n=20	35%		25%		10%			
Cwikel 2004 [] n=84	60%	40%	53%	57%				55%
Kiss 2015 n=1015	21%	19%		10%	18%	16%	14%	20%
Oram 2012 [] n=120	62%	51%	61%	35%		44%	26%	
Turner-Moss 2013 n=35	43%	36%	10%	23%	30%	13%	13%	10%
Zimmerman 2008 [] n=192	83%	69%	61%	58%	81%	62%	47%	70%

Table 6: Prevalence and risk of HIV infection among trafficked women (n=8)

Author and year	Method used to assess HIV	Frequency of HIV infection (Trafficked people)	Frequency of HIV infection (Controls)	Crude Odds ratio and 95% CI	Adjusted Odds ratio and 95% CI
Sex industry samples					
Sarkar 2008 []	Serological tests (ELISA and tri-dot)	24/183 (13.1%)	40/397 (10.1%)	1.35 (0.75 – 2.4)	
Goldenberg 2013 []	Serological tests (rapid antibody testing using an HIV-1 enzyme immunoassay and immunofluorescence assay)	2/31 (6.5%)	7/183 (3.8%)	1.73 (0.34-8.76)	
Wirth 2013 []	Serological tests (ELISA)	37/107 (34.3%[c])	273/1707 (16.0%)	2.74 (1.41-5.1)	2.30[d] (1.08 - 4.90)
Post-trafficking support service samples					
Falb 2011 []	Test results as recorded in case files	10/44 (22.7%)	-	-	
Gupta 2009 []	Serological test results as recorded in case files (ELISA or Western Blot)	22/48 (45.8%)	-	-	
Silverman 2006 []	Serological test results as recorded in case files (ELISA or rapid testing for HIV-I and HIV-II)	40/175 (22·9%)	-	-	
Silverman 2007 []	Serological test results as recorded in case files (ELISA, Western blot, or rapid testing for HIV-I and HIV-II).	109/287 (38.0%)	-	-	
Tsutsumi 2008 []	Self-report	Sexual exploitation 13/44 (29·6%) Labour exploitation 0/120 (0.0%)	-	-	

[c] Weighted percentage accounting for the probability of selection into the sample using the survey weights provided by the Integrated Behavioural and Biological Assessment.

[d] Estimated from a weighted marginal structural logistic regression model with district-specific weights constructed to simultaneously adjust for the unequal probability of selection induced by the survey's complex sampling strategy and the following confounders: literacy, whether the participant was widowed and/or deserted at the time of entry into the sex trade, use of sex work to support drug use and age at entry.

Table 7: Sexually transmitted infections amongst women trafficked for sexual exploitation (n=13)

Author and year	**STI diagnosis or self-reported symptoms**
Crawford 2008 n=20	35%
Cwikel 2004 n=84	5.7%
Dal Conte 2011 n=1,400	58%
Decker 2011 n=85	65.9%
George 2013 n=574	49.3%
Goldenberg 2013 n=31	23%
McCauley 2010 n=73	65.8%
Servin 2015 n=20	30%
Silverman 2008 n=246	Syphilis 20.4% Hepatitis B 3.8%
Silverman 2014 n=211	39%
Urada 2014 n=56	32[e]%
Varma 2015 n=27	52.6%
Zimmerman 2008 n=192	58%

[e] Last 6 months